Journal of Kufa for Nursing Science Vol. (4) No.(1) 2014

Effect Of Age And Previous Surgery Experience On Preoperative Anxiety

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الخلاصة:
خلفية البحث: تأثير العمر والعملية الجراحية السابقة على مستوى القلق قبل العملية الجراحية لقد تبين ان اكثر من اربعين عاما بان خبرة المرض تختلف نحو مستويات القلق عند تعرضهم للعملية الجراحية ودرجات القلق التي تواجة المريض له علاقه بعوامل مختلقه.
الهدف : تهدف هذه الدراسة لمعرفة تاثير العمر والخبرات السابقه عن العملية الجراحية على القلق ما قبل العملية الجراحية.
اجراءات الدراسة : لغرض الدراسة تم اختيار ٢٠٠ عينه من المرض الذين تم ادخالهم لكل من المستشفيات التعليمية (رزكاري و هولير) اعتبارا من ٥ نيسان لغاية ١٠ تشرين الثاني \ ٢٠٠ . تم مقابلة ٢٠٠ مريض من اللذين دخلوا وحدة الجراحة العامة لغرض تقييم حالة القلق عندهم قبل العملية الجراحية ومعرفة تاثير العمر والخبرات السابقة عن العملية الجراحية على مستوى القلق لديهم. ويضم استبيان البحث على معلومات ديموغرافية وهذا المقياس المقنن pilberger. STAI State-Trait Anxiety Inventory (STAI) of يشمل ٢٠ فقرة لقياس حالة القلق لديهم .
النتائج : غالبية المرض لديهم مستوى القلق ما بين المتوسط والشديد(المتوسط ٥٠% و الشديد ٣٨. ٣) واما الاخرون ٧ .١١ % كانت مستوى القلق عندهم خفيف ، واما العلاقة بين العمر والخبرات السابقة عن العملية الجراحية قبل العملية حيث بينت التحليل الاحصائى وجود علاقة معنوية. واشارت النتائج ان المرض الذين هم في مرحلة الشباب ولم يتعرضوا للعملية الجراحية كانت مستوى القلق عندهم اكبر .
الاستنتاج : استنادا الى نتائج الدراسة ان غالبية المرض يحتاج لتقييم مستوى القلق قبل العملية الجراحية والقلق يجب ان يقلل بمختلف الطرق.

ABSTRACT
Background: It has been recognized for more than 40 years that patients experience different levels of anxiety when faced with impending surgery. The degree to which each patient manifests anxiety is related to many factors.
Objective: This study aims to identify the effect of age and previous surgery experience on preoperative anxiety.
Patients and methods: For the purpose of this study a sample of 200 patients who were admitted from 5th April 2009 to the 10th November 2009; in general surgery units of teaching hospitals (Rezgari & Hawler) in Erbil city were interviewed to assess their level of anxiety before surgery and identify effect of age and previous surgery on anxiety. The instrument used for this purpose was a questionnaire that included socio-demographic information and the State-Trait Anxiety Inventory (STAI) of Spilberger. STAI is a validated scale which includes 20 items related to measurement of state anxiety. High scores indicate high levels of anxiety.
Results: Most of the patients showed moderate to severe anxiety level; (moderate=50% and severe=38.3%) others showed mild anxiety level (11.7%). A statistically significant relationship was seen between age and previous surgery experience before surgery. Young patients with first surgery experience showed higher level of anxiety.
Conclusions: According to the results of the study patients undergoing major surgery need to be assessed regarding level of anxiety before surgery. This anxiety should be reduced through appropriate interventions, especially in young patients with no previous surgery experience that have been found to experience high levels of anxiety.
Key Words: preoperative anxiety, major general surgery, .

INTRODUCTION

Patients experience different levels of anxiety when undergoing surgery and it is commonly associated with loss of independence or control, anesthesia concerns, unwanted diagnoses, postoperative pain and fear of death [1]. Many studies describe anxiety as an intense, unpleasant emotional state. There are two main groups of symptoms of anxiety: physical and psychological. Physical symptoms include palpitation, tremors, dizziness, nausea, fatigue and insomnia. Psychological symptoms include tension, nervousness, and fear, irritability, agitation, restlessness and concentration difficulties [2].

The degree to which each patient manifests anxiety is related to many factors. These include age, gender, type and extent of the proposed surgery, previous surgical experience, and personal susceptibility to stressful situations. Some degree of anxiety is a natural reaction to the unpredictable and potentially threatening circumstances typical of preoperative period, especially for the patient's first surgical experiences [3]. There are two types of anxiety which affect patient's reports of physical symptoms and the duration of hospitalization. These are state anxiety and trait anxiety. Trait anxiety is seen as relatively permanent personality characteristic, whereas state anxiety is seen as a transitory fluctuating state, increasing in surgical patients. Transitory or state anxiety level is high in threatening circumstances, and relatively low in situations in which there is little or no danger. However, trait anxiety is not affected by situational stress. Consistent with these assumptions from trait-state anxiety theory, a number of studies indicated that state anxiety is elevated prior to surgery and declines after surgery and during the post-operative recovery period [4].

A variety of objective and subjective methods are available for measuring preoperative anxiety. Objective methods include indirect measurement of sympathetic-adrenal activity using heart rate, blood pressure or skin conductance.

Plasma catecholamine excretion measurement has been used as more direct method of detection of sympathetic-adrenal activity. Subjective methods include self assessment by the patient using a multiple affect adjective check list. The gold standard for preoperative anxiety measuring is State-Trait Anxiety Inventory (STAI) of Spielberger. This test has been used in more than one thousand studies [5]

Importance of study: Anxious patients require higher doses of anesthetic induction agents and postoperative analgesic drug the most important single reason for pre-medicating patients before surgery is to reduce anxiety because if anxiety is sufficiently marked, it causes all the signs of sympathetic stimulation and stress. The heart rate and systolic pressure rise, the skin is pale and often sweaty, and the veins are characteristically constricted. There may be ventricular ectopic beats or in extreme circumstances ventricular fibrillation [5]. Greater distress or anxiety prior to surgery is associated with a slower and more complicated postoperative recovery [6]. So if we find that there is relation between age and previous surgical experience we can pay more attention to these two factors and trying to reduce anxiety.

PATIENTS AND METHODS

The present study was carried out in Rizgary teaching hospital with a bed capacity about 400 beds, and Hawler teaching hospital with a bed capacity about 500 beds in Erbil governorate. Both of them are general hospitals and they have medical and surgical wards with operation rooms and all diagnostic tools (laboratory, X ray, and histopathology…..etc) and also outpatient departments.

Setting of present study was in general surgical units of both hospitals. General surgery department is one of inpatient parts include both female and male units and patients who are waiting for surgery and receiving preparation for surgery (pre-op medication) or receiving post operative care after surgery.

For the purpose of this study a written official permission has been obtained from College of Nursing, Hawler Medical University and two teaching hospitals (Hawler and Rizgary) in Erbil city as well as patient's informed consent. A sample of 200 patients who were admitted to general surgery units from 5th April 2009 to the 10th November 2009were interviewed at night of surgery by the researcher for about (40) minutes using a questionnaire. 60% of patients were taken from Rizgary and 40% were taken from Hawler teaching hospital. The questionnaire included socio-demographic information and State-Trait Anxiety Inventory (STAI) of Spilberger, which contains 20 items for state anxiety measuring. Each item has 4 alternatives: not at all=1 sometimes=2 moderately=3 very much=4 High scores indicate high levels of anxiety.

- Scores 0-20 = no anxiety
- Scores 21-40 = mild anxiety
- Scores 41-60 = moderate anxiety
- Scores 61-80 = severe anxiety

State-Trait Anxiety Inventory is a self-report assessment device in English language but because most of patients were illiterate so researcher reported it by her self for each patient. For preventing mistakes during interview and more reliability of scale, the scale translated to Kurdish and then from Kurdish translated to English again. So the researcher applied one translated scale for all patients.

Inclusion criteria were: the age of 18 and above and from Erbil governorate. Exclusion criteria were: known cases of psychiatric disorders. The data were analyzed by applying SPSS through Chi-square test and descriptive analysis (frequency and percentage).

RESULTS

Table 1: Demographic distribution of patients undergoing major general surgery.

Age interval (years)	**No. of patients (200)**	**%**
20-29	33	16.5
30-39	44	22.5
40-49	65	32.5
50-59	36	18
60 and above	22	11
Total	200	100
Gender	**No. of patients**	**%**
Male	100	50
Female	100	50
Educational level	No. of patients (200)	%
Illiterate	92	46
Read & write	65	32.5
Primary graduation	25	12.5
Secondary graduation	12	6
Institute	4	2
College & higher	5	2.5
Occupation	No. of patients	%
Housewife	90	45
Jobless	13	6.5
Employer	36	18
Free work	61	30.5

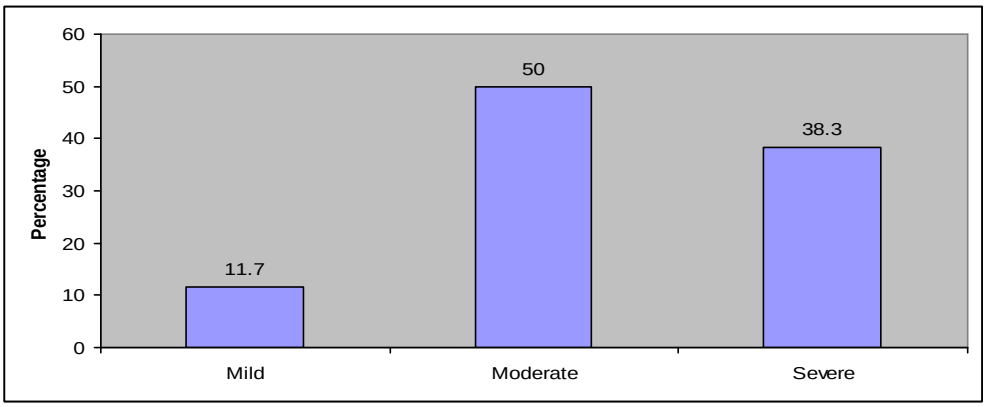

Fig.1 The level of anxiety among patients undergoing major general surgery

Table 2: Association between age and preoperative anxiety

Age	**Pre-operative anxiety level**								
	No anxiety		**Mild**		**Moderate**		**Sever**		**Total**
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	
20-29	0	0	3	9	5	15.2	25	**75.8**	33
30-39	0	0	3	6.8	16	36.4	25	56.8	44
40-49	6	9.2	8	12.3	46	**70.7**	5	7.8	65
50-59	10	27.8	15	**41.6**	11	30.6	0	0	36
60 and above	9	**41**	7	31.8	6	27.2	0	0	22
Total	25		36		84		55		200
P value	0.000								

Table 3: Association between previous surgery and preoperative anxiety

Previous surgey	**Preoperative anxiety**								
	No anxiety		**Mild**		**Moderate**		**Sever**		**Total**
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	
Yes	10	**21.7**	17	37	19	41.3	0	0	46
No	15	9.7	19	12.3	65	42.2	55	**35.8**	154
Total	25		36		84		55		200
C- test	**0.000**								

Two hundred patients undergoing major general surgery participated in this study. From these 100 were female and 100 were male; the highest percentage of patients (32.5%) were at age range of 40-49 years, majority of them were illiterate (46%), housewife occupation for female patients (45%), free work occupation for male patients (30.5%) as are shown in **Table 1.**

Most of patients showed moderate to severe anxiety level (50%, 38.3%) respectively, others showed mild anxiety level (11.7%). (**Figure 1**).

The percentage of pre-op-anxiety in old age groups are less than young age groups. The highest percentage of no-anxiety level before surgery was detected at age group of 60 years and above (41%, 31.8% respectively); The highest percentage of anxiety of mild level before surgery was found at age group of 50-59 years (41.6%); The highest percentage of anxiety of moderate level before surgery was observed at age group of 40-49 years (70.7%);The highest percentage of anxiety of severe level before surgery was noticed at age group of 20-29 years (75.8%); Highly significant association was found between age of patients and level of anxiety before and after surgery at level of $P<0.01$ by contingency coefficient test (**Table 2**).

Patients who had previous surgery had high percentage of no anxiety before surgery (21.7%), while patients who had no previous surgery had high level of severe anxiety before surgery (35.8%).

Highly significant association ($p=0.000$) was found between patient's previous surgery and pre-op anxiety by contingency coefficient test at level of $p>0.05$ (**Table 3**).

DISCUSSION:

In present study the highest percentage of patients were at the age group of 40-49 years (32.5%) respectively (table: 2) and percentage of pre-op-anxiety in old age groups are less than young age groups. This finding can be explained by the fact that younger age group probably has less experience and more prone for anxiety and fear in comparison to older person.

Older patients typically would be expected to have more experience of hospital admissions, surgery and general anesthesia and thus it may be these factors and not age alone that account for the lower anxiety levels in older patients. Highly significant association was found between age of patients and level of anxiety before surgery at level of $P<0.01$ (table: 2). There are many studies which support this finding for example three studies are (Jens-Holger et al, 2007, Bruggemann et al, 2004 and Kindler et al, 2000) all of them stated that younger patients show higher levels of anxiety before surgery. There is one study (McKinley and Gallagher, 2007) which disagree with the finding of present study and found higher levels of preoperative anxiety among elderly patients.

The present study results revealed that patients who had no previous surgery showed high level of severe anxiety before surgery, and highly significant association was found between patient's previous surgery and pre-op anxiety at level of $p>0.05$ (Table: 3). This finding is supported by (Caumo et al, 2001, Kindler et al, 2000, Badner et al, 1997) they found that patients who had previous surgical experience show lower levels of preoperative anxiety. Such findings can be explained by having previous surgery make the patient more aware about the process, anesthesia, postoperative pain render the patient more experienced toward second operations. There is one study that failed to demonstrate the same result with present study which is (Martin, 1993) who found that patients who had previous surgery had more anxiety level than others who had not.

CONCLUSION:

According to the results of the study patients undergoing major surgery need to be assessed regarding level of anxiety before surgery. This anxiety should be reduced through appropriate interventions, especially in young patients with no previous surgery experience that have been found to experience high levels of anxiety.

RECOMMENDATION:

surgical nurses and surgeons must give appropriate information to patients before surgery.

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